
IMPACT OF ECONOMIC FACTORS ON THE PROCESS OF POPULATION TRANSITION FROM LABOUR ACTIVITY TO PENSION IN THE REPUBLIC OF MOLDOVA

Galina SAVELIEVA¹
Svetlana ZAHAROV^{2*}

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Abstract

The purpose of research is to analyse the impact of population ageing process on labour force market, as well as economic factors on the transition from labour activity to pension in the Republic of Moldova. The change in the structure of labour force to wards elder ages, as well as interruption of active economic activity and retirement is one of the factors in economic growth slowdown, which is conditioned by a reduction of labour force reproduction and its growth. In this situation, in order to mitigate the negative consequences of labour force deficit, it is necessary to take effective measures to increase labour productivity not only to ensure economic growth, but also to ensure the welfare of the country's population and meet the necessities of an increased share of the population-dependents (both the elderly population and children under 15). Taking into account the relevance of the above-mentioned problem, the analysis of the relationship between economic factors and the transition from labour activity to pension in the conditions of demographic ageing was carried out, including the evaluation of the role of economic factors in making a decision to exit from the labour market to pension. In this context, the comparative quantitative and qualitative analysis of tendencies in the economically active and employed population was carried out, including pre- and pension ages and the phenomenon of precarious employment, the demographic coefficient of dependence on old age, the dependence of pension from the income level, and the financial stability of the Social Insurance Budget. The proposals to improve the effectiveness of government policies in regulation and harmonization the transition from the labour market to pension, including the continuation of active economic activity was elaborated in order

¹ Ph.D., Associate Professor Researcher, Center for Demographic Research, National Institute for Economic Research, Academy of Economic Studies of Moldova, Republic of Moldova; savelievagalina@rambler.ru, gts6@mail.ru.

² Ph.D., Scientific Researcher, Center for Demographic Research, National Institute for Economic Research, Academy of Economic Studies of Moldova, Republic of Moldova; zaharov.svetlana@gmail.com.

* Corresponding author.

to reduce the negative consequences connected with the process of population ageing and to ensure the stability of labour market development. The article is developed in the framework of the research Subprogramme "The demographic transition in the Republic of Moldova: particularities, socioeconomic implications and demographic resilience straightening" (2024-2027).

Keywords: *employment, income, pensions by age, transition from work to pension, labour force market, ageing population, economic factors.*

1. Introduction

Demographic ageing and, as a consequence, interruption of labour activity due to retirement is one of the most important factors in the socio-economic development of the country. Thus, the consequence of the process of population ageing and the transition from active economic activity to pension or to the category of economically inactive population may be one of the factors, which will result in the slowdown of economic growth. This circumstance is conditioned by a decrease in the reproduction of labour force, i.e. a tendency to reduce the growth of labour force with condition that effective measures are not taken to increase labour productivity to mitigate the negative consequences of labour force deficit in conditions of its decline. The decline in labour force has negative consequences conditioned not only to ensuring economic growth, but also to ensuring the well-being of the country's population and meeting the needs of an increased share of the population-dependents (both the elderly and children under 15). This situation is conditioned by the fact that there is a process of gradual ageing of labour force, an increase in the share of elder workers in economically active population, and the given shift in age may affect the structure of goods and services produced, including the overall efficiency of the country's economy. Economic growth is associated with consumption, but the model of consumption changes with age. The structure of consumption is changed not only on ageing of the individual, but also on other components, including the main role in them belongs to the income. Due to the analysis the amount of labour income its greatest value during the life cycle takes place during the period of labour economic activity, especially in the middle of life, when there is a flourishing in the sphere of work and career, and its decrease takes place in old age, i.e. during the transition from labour activity to pension. As a rule, a decrease in income leads to a decrease in the level of consumption, i.e. it can be concluded that demographic ageing and growth of the elderly population impact the economic growth in the country.

Economic growth is also associated with investments and savings. However, the process of accumulation of funds depends on opportunities, including income, and the possibility of their receipt decreases with age. In this context, the growth of elderly population indirectly affects the savings accumulation in the country as a whole and the accessibility to the use of aggregate savings as investment capital, i.e. ageing and the transition from labour activity to pension has also consequences for financial markets. According to the experience of developed countries, the main share of the population's savings is directed to pension provision in the conditions of ageing and cannot be an additional resource for liquidity of long-term investment projects.

2. Theoretical and Research background

As a response to the negative consequences of population ageing on socio-economic development, the scientific literature proposes a number of concepts on active ageing, which will reduce, mitigate the burden of population ageing on the economy, including the concepts of active ageing, productive ageing, successful ageing, harmonious ageing and others, which have many common interpretations and differences. At the same time, old age was considered as a period of life in which there are physical and psychological decline and social isolation, and learning, work and leisure are three independent consecutive stages (Kohli M., 1986), with the third stage characterised as a period of dependency, decline and losses (Townsend J., Godfrey M., Denby T., 2006). However, only the scientists Katz S. and Calasanti T. noted for the first time, that the definition of *successful ageing* (Katz S., Calasanti T., 2015) is a state in which "an elderly person experiences maximum satisfaction with life without serious costs for society" (Vasilieva E.V., 2021). The definition of *successful ageing* has found support among many scientists, including it was supplemented and according to the analysis of Resnick B. (2013) there are 29 variations of its definition, in which the absence of physical and mental illnesses in the given category of persons is noted. Subsequently, this definition was amended due to the fact that the elderly considered themselves to be ageing successfully, although they had chronic illnesses and health problems, but they associated success with activity, independence, satisfaction and a number of other factors (Ferguson S.J., 2020). At the same time, many scientists disagree with the definition of *successful ageing* and approaches to ageing, putting forward other alternatives, as a result, the focus on the problem of ageing was changed from social protection to active involvement in public life and fuller use of the potential of the elderly population. So, the Madrid International Plan of Action, adopted by the World Assembly on Ageing in 2002, is focuses on health promotion, active participation and fuller utilization of the potential of the older population. The Madrid International Plan of Action, adopted by the World Assembly on Ageing in 2002, is oriented on health promotion, active participation in society and labour market, improvement of living conditions and provision of income for elder population, and taking into account the relationship between activity and health, and taking into account the existing concepts of ageing, WHO proposed to promote the concept of *active longevity*. The definition of *active longevity* in the scientific literature is considered in terms of two approaches:

- *complex approach* includes active longevity in a more a wider sense, taking into account the relationship the between activity of elder person and his health, and, in particular, this interpretation is the substantiation for realization of inclusive policies. This approach to *active longevity* is a preventive concept that focuses on the involvement of all age groups in the ageing process throughout the life course, including maintenance of health, participation and the development of social security systems;
- *economic approach*, representing more a restricted interpretation, which consists in both living and working longer, i.e. the essence of this approach is to reduce the economic

burden on the state by prolonging labour activity, as well as the population's health in elder age.

The above-mentioned approaches to **active longevity** do not contradict one another, as they contain identical components, although they have different focus. At the same time, they cover different groups of population. Thus, the *complex approach* is oriented on the realization of the potential of all working persons in economic, social, cultural, spiritual and civil spheres without taking into account their physical and mental state, social well-being as they age.

The *economic approach* is based on the labour activity of elder workers who are able to take responsibility for their lives and contribute to the development of the economy and society. This approach in government programmes that provide for the active longevity of elder persons and their participation in the social and economic development of the country, on the one hand, contributes to reduce government spending, and on the other hand, contributes to improving their quality of life based on the use of their experience and knowledge, increases their total income, which is an important element of security, independence and healthy life.

Consequently, taking into account the fact that population ageing and, especially, termination of labour activity and retirement are factors that create direct or indirect threats to the country's socio-economic development, the realization of the concept of *active longevity* (labour activity, safety, health) creates an opportunity to counteract threats to the country's economic security, contributes to reduce the economic burden, the deficit of labour force. Table 1. presents the results of empirical studies of scientists to assess the impact of population ageing on economic growth.

Table 1 Quantitative assessment of the impact of the demographic ageing process on principal macroeconomic indicators

Authors and studies	Country/Region	Forecasting period	Scale of impact on macroeconomic indicators	Main sources of impact
Martins J. et al. (2005)	OECD	2005-2050	-0.2 – (-0.3) p.p. per year (GDP per capita)	Decline in labour force (growth in the level of education of young workers partially compensates for labour force deficit)
Otsu K., Shibayama K. (2016)	17 Asian countries	2015-2050	-0.5 p.p. per year (GDP per adult 15+)	Decline in labour force
				Slowdown in capital accumulation rates
				Decrease in total factor productivity(TFP)
				Growth in labour taxes
Maestas N. et al. (2016)	USA	2010-2030	From -0.6 to -1.2 p.p. per year (GDP per capita)	Decline in labour force
				Decrease in labour productivity

Nerlich C., Schroth J. (2012)	EU countries	2015-2065	-4.7% (GDP per capita)	
			-5.6% (consumption per capita)	
			-5.1% (number of employed population)	

Source: Gurvich E.T., Ivanova M.A. (2018).

From the analysis of the research results of scientists, the consequences of population ageing on economic growth in different countries are obvious, which are mainly reflected in the reduction of GDP per capita, labour productivity, and capital accumulation. For example, according to the calculations of scientists (Maestas N., Mullen K. J., Powell D., 2016) in the USA, with population growth in aged 60 and over by 10% slowdown in the GDP per capita growth rate will be 5.5%, which is a consequence of the decrease in labour productivity as a result of the growth of their average age (by 2/3) and the decline of labour force (by 1/3).

Consequently, the ageing of the population and its important life stage, one of the factors of which is the decline in the working-age population due to the interruption of labour activity and retirement, has serious socio-economic consequences, including a decrease in the rate of economic growth and the sustainability of the country's Budget System. As a consequence of the given process, there is a decline in the working population in relation to non-working population, or a growth in the category of dependents who are economically dependent on other people's income (this category includes children under 15 years and elderly population in non-working age, usually over 60 years old). Ageing has a negative impact not only on economic growth, but also, ultimately, on the reduction of public well-being of the country's population, which is a challenge for public finance (the growth of life expectancy causes the necessitate to increase in funding for health, social protection and social security, leads to changes in the structure of consumption, etc.). At the same time, this process also has a negative impact on labour market (there is a deformation in the age-gender composition and professional quality of labour market, labour force deficit). The process of population ageing and, as a consequence, the decline in the number of working-age population, including due to the interruption of labour activity and retirement, has serious socio-economic consequences, one of which is a decrease in the economic growth rate and, as a result, the sustainability of the country's Budget System. As a consequence of the ageing process, there is a decline in working population in relation to non-working population or dependents who are economically dependent on other people's income (this category includes children under 15 years and elderly population in non-working -age, as a rule over 60 years old). Given the above, the problem of population ageing can be considered as an inevitable cause of the growth of economic costs, which is an important challenge to ensure stable socio-economic development of the country and this indicates its relevance and the necessary for more a deeper research.

3. Purpose of the research, data and methods applied

The principal purpose is to analyse the relationship between economic factors and the transition from labour activity to pension in the conditions of demographic ageing of population. The change in the structure of working population in favour of an increase in the share of elder age, the implementation of structural reforms, the promotion of the private form in all spheres of economic activity, the growth of inflation, the complex foreign policy and economic environment, all of the above-mentioned factors, along with the ongoing demographic processes, have an impact on the stability of economic development, the budget-financial system, the formation of the Social Insurance Budget and its financial stability, as well as the competitiveness of labour market. As a consequence of demographic factors, there is a decline in the number and deformation of age-sex composition of labour force, replenishment of informal employment at the expense of the population of pre- and pension age due to the reduction or refusal to work on the basis of age, changes in the status of worker and the transition from labour activity to pension, including a decrease in his income and a reduction in the quality of life. **In more wide** socio-economic aspect, there is a reduction in the number of payers of social insurance contributions, that impact the reduction of principal resource for formation Social and Health Insurance Budgets and ensuring their financial stability, as well as the reorientation of the economy and social sectors as a result of changes in the structure of consumption due to the predominant share of the ageing and elder population.

Based on the analysis of the relationship between economic factors and the transition from labour activity to pension in the conditions of population ageing, a number of recommendations have been developed to improve socio-economic policies in the conditions of demographic changes, promoting the principle of active ageing and increasing the efficiency of the pension system in the Republic of Moldova. The realization of the set purpose was carried out on the basis of the following objectives:

Analysis of tendencies of changes in population structure, including the elder population by main age categories, ageing coefficient, pensioners by age and by the presence of labour experience, who retired early. Analysis of age structure of employed population, assessment of the quality of labour market by professional composition depending on age, as well as by types of economic activity, the level of involvement of pension age persons in labour market, including participation in informal employment.

Analysis of income as a result of economic activity, including wages by main types of economic activity, the ratio between pension by age and wages by agricultural and non-agricultural sectors on the basis of male-female characteristics, as well as an assessment of the average monthly disposable income depending on the age of the household head and the risk of poverty.

Determination of economic factors that cause the interdependence between economic activity, its stopping and retirement from labour market.

Elaboration of recommendations for improving socio-economic policies in the conditions of demographic ageing of the population and increasing the standard of living and quality of life of the elder population.

To achieve the objectives of given research, were used complex and systemic approaches, scientific methods such as quantitative and qualitative analysis, comparative analysis, authors' calculations and others.

Official statistical data of the National Bureau of Statistics of the Republic of Moldova, the National Social Insurance Fund, research materials of scientific and non-governmental organisations, indicators calculated by the authors were used for the analysis. In the analysis, the number of population with usual residence was used, defined as the place where the person lived mainly during the last 12 months, regardless of temporary absences (for rest, leaves, visits to relatives and friends, business, medical treatment, religious pilgrimages, etc.). Employment and disposable income indicators are analysed for the period from 2019 and continue, due to changes in the methodology for the calculation of some indicators and in the sample volume of surveys conducted by the National Bureau of Statistics.

In this article, when analysing the process of transition from economic activity to pension, the notion "retirement- exit on pension" will be understood, firstly, as achievement the pension age established by national legislation for women and men and making a decision to stop working and exit the labour market, and, secondly, as the registration of pension as a juridical status of the above-mentioned individual when analysing the number of pensioners.

4. Results of the research

The contemporary world is ageing and the tendency of demographic ageing, which affected to European countries, becomes an integral factor in the socio-economic development of the Republic of Moldova, whose population is ageing at an accelerated rate. According to demographic forecasts, with decline of population and, especially, of the youth, as a consequence of external migration and negative natural increase, by 2030 the share of the population aged 60 and over will be about 28%, and in 2040 it will increase to 31%. At the same time, the share of the population over 70 years old will double, or from 8% to 17.2% (Buciuceanu-Vrabie M., 2021, p. 6). The share of population aged 65 and over in total population of the country increased from 6 % in 1990 to 10% at the beginning of 2022 and by 2050, according to forecasts, its share will increase to 16%. The population ageing coefficient (the share of population aged 60 and over in total population with a usual residence) as of 01.01.2022 was 22.8% or increased by 2.8 p.p. compared to the beginning of 2018 (NBS, 2022), and as of 01.01.2023 it increased to 23.8% or by some more 3.8 p.p.

Moreover, among the elderly population of 60 years and over, it is necessary to note the tendency of growth of population of elder ages: thus, the share of the age group 70-74 years increased from 14.50% at the beginning of 2019 to 23.24% at the beginning of 2023

(by 8.74 p.p.). The number of females in given age group exceeds the number of males, including both as of 01.01.2019 and as of 01.01.2023 by 1.6 times and has a tendency of quantitative growth in females by 175.02% and in men by 173.14%. Given tendencies, indicate a high enough level of demographic ageing of country's population, which follows from a comparative analysis of the data presented in Table 2.

Table 2 Structure of elderly population, Republic of Moldova

	at the beginning of the year		Change of indicator +/-
	2019	2023	
Population with usual residence			
Total, persons	2684772	2512758	- 172014
%	100.00	100.00	93.59
0-15 years, persons	528814	483232	- 45582
% of total	19.70	19.23	- 0.47 п.п.
16-56/61 years (working-age population), persons	1602987	1483465	- 119522
% of total	59.71	59.04	- 0.67
57/62 years and over (non-working age population), persons	552971	546061	- 6910
% of total	20.59	21.73	- 1.14
Age groups of total population with usual residence, %			
Total population	100.00	100.00	-6.41
55-59 years	6.75	6.62	-0.13
60-64 years	7.70	7.75	+0.05
65-69 years	6.23	6.48	+0.25
70-74 years	4.78	5.27	+0.49
75-79 years	1.92	1.91	-0.01
80-84 years	1.55	1.57	+0.02
85 years and over	0.81	0.82	+0.01
Age groups of total population with usual residence, 60+, %			
Total, 60+	100.00	100.00	108.75
60-64 years	29.46%	34.18%	+4.72
65-69 years	31.61%	23.58%	-8.03
70-74 years	14.50%	23.24%	+8.74
75-79 years	12.36%	8.44%	-3.92
80-84 years	7.85%	6.94%	-0.91
85 years and over	4.22%	3.62%	-0.60
Males/Females, %	91.40	89.62	-1.78
Population ageing coefficient, %	20.8	23.8	+3.8
Females, %	23.9	27.1	+3.2
Males, %	17.5	20.1	+2.6

Source: NBS data and authors' calculations, www.statistica.md

As of 01.01.2023, the working-age population (15-64) is predominant and constitutes 65.9% of total number of population, including, according to the age standards established by national legislation, working-age population is 59.04% (age of women 16-

59 years and men 16-62 years). At the same time, the average age of population increased by 0.4 years as of 01.01.2023 as compared to 01.01.2022 (or from 39.9 to 40.3 years), which also indicates the ageing of population.

The age structure of population is also reflected in the structure of labour market, its principal component of labour force, its both quantitative and qualitative characteristics and, ultimately, its competitiveness and possibility to ensure stable socio-economic development of the country. Demographic changes associated with population decline, migration processes and ageing are reflected in the age structure of labour force market.

Table 3 Characteristics of economically active and employed population by main age groups, Republic of Moldova

Indicators, age group	Thousand persons				%			
	2019	2020	2021	2022	2019	2020	2021	2022
Economically active population, 15 and over								
Total	919.3	867.3	871.6	890.0	100.0	100.0	100.0	100.0
15-24 years	62.8	51.2	48.5	47.3	6.8	5.9	5.6	5.3
25-34 years	230.8	209.9	205.6	199.8	25.1	24.2	23.6	22.4
35-44 years	225.2	222.2	230.3	238.4	24.5	25.6	26.4	26.8
45-54 years	207.5	198.2	201.7	213.2	22.6	22.9	23.1	24.0
55-64 years	165.0	160.9	164.9	168.6	17.9	18.5	18.9	18.9
65 years and over	27.9	25.0	20.6	22.7	3.1	2.9	2.4	2.6
Employed population, 15 years and over								
Total	872.4	834.2	843.4	862.3	100.0	100.0	100.0	100.0
15-24 years	56.2	45.6	44.1	42.3	6.4	5.5	5.2	4.9
25-34 years	217.5	202.1	199.5	194.7	24.9	24.2	23.7	22.6
35-44 years	213.2	213.7	223.2	231.5	24.4	25.6	26.5	26.8
45-54 years	199.0	191.6	195.7	206.8	22.8	23.0	23.2	24.0
55-64 years	158.6	156.2	160.4	164.5	18.2	18.7	19.0	19.1
65 years and over	27.9	24.9	20.6	22.6	3.3	3.0	2.4	2.6
	Economic activity rate, %				Employment rate, %			
Total, %	42.3	40.3	41.1	41.8	40.1	38.8	39.8	40.5
15-24 years	21.2	18.3	18.1	17.7	19.0	16.3	16.4	15.8
25-34 years	55.2	52.1	53.5	53.5	52.1	50.2	52.0	52.2
35-44 years	61.2	59.9	61.4	61.3	58.0	57.6	59.5	59.6
45-54 years	62.2	60.0	61.2	63.7	59.7	58.0	59.4	61.8
55-64 years	42.2	41.7	43.8	45.2	40.5	40.5	42.6	44.1
65 years and over	7.6	6.6	5.3	5.8	7.6	6.5	5.3	5.7

Source: NBS data and authors' calculations, www.statistica.md

Quantitative analysis of the data on the economically active and employed population shows a downward tendency by 3.2% and 1.2% in the country as a whole, respectively, by 2022 as compared to 2019. At the same time, the share of youth in the 15-24 age category is decreasing of both economically active and employed population by 1.5 p.p.,

respectively. Simultaneously with the decrease in the share of youth in 15-24 and 25-34 (by 3.8 p.p.), there is a tendency to increase the share of elder age groups of 45-54 years - by 1.2 p.p. and 55-64 years - by 0.9 p.p. in the structure of employed population. Moreover, against the background of aging of the labour market, there is a negative tendency of decrease in the indicators of economic activity (-3.5 p.p.) and employment (-3.2 p.p.) of the youth group aged 15-24 years in the labour market during the analyzed period. The number of economically active and employed population aged 15-24 years decreased by 24.7% in 2022 compared to 2019, while the share of the employed population aged 15-24 years was 4.9% in 2022 and the share of the population aged 55-64 years was 19.1% or 14.2 p.p. more. As follows from the analysis of the data on economic activity rate, the highest is observed in age group 45-54 (63.7% or 21.9 p.p. higher than the national average, including employment rate (61.8%), respectively, higher than the national average by 21.3 p.p. In the 55-64 age group, the economic activity rate is lower at 45.2 % (3.4 p.p. higher than the national average) and the employment rate at 44.1 per cent (3.6 p.p. above the national average); however, these indicators are higher than those of the youth group 15-24.

The ageing of labour market, as a consequence of one of the principal causes or demographic ageing of population, is a challenge to another negative tendency, which is characterised by the indicator demographic old-age dependency ratio. Given indicator characterises the number of population over 65 years of age relative to the population in working age 15-64 years or shows the number of pensioners that one potential worker in the working age should provide.

Table 4 Dynamics of demographic dependence on old age

	At the beginning of year					2023(2022)/ 2019, %
	2019	2020	2021	2022	2023	
Total population, 65+, persons	369592	380993	389001	394131	403504	109.2
Working-age population, 15-64, persons	1814393	1774120	1756122	1736898	1656010	91.3
Demographic old-age dependency ratio*	20.4	21.5	22.2	22.7	24.4	+ 4.0 p.p.
Employed population/Pensioners (based on Labour Force Survey data)**						
Employed population, thousand persons	872.4	834.2	843.4	862.3	-	98.8
Pensioners, thousand persons	566.2	580.2	583.5	580.1	-	102.5
Pensioners in labour market, persons as of 01.01.	174 757	175 656	172 516	169 529	-	97.0
Share of pensioners by age in labour market as of 01.01., %***	23.0	23.4	23.7	24.0	-	+ 1.0 p.p.

Employed population/Pensioners, %	1.5	1.4	1.5	1.5	-	-
Pensioners/Employed population, %	0.65	0.70	0.69	0.67	-	+0.02

Note: *ratio of population (65+) per 100 persons of working-age (15-64).

** To calculate indicators of interdependence between pensioners and employed population, data from the Labour Force Survey (LFS) were used to ensure comparability of data.

*** Number of pensioners who receive pensions and who continue to work in labour market at the time of pension registration.

Source: authors' calculations on the basis of NBS data www.statistica.md

The analysis of employment of population in the pre- and retirement ages showed that these age categories have a shift towards more intellectual fields (including public administration, education, health and social assistance), as well as labour activity in the agricultural sector. In the last two years, the ageing of labour force has taken place in construction, trade, hotels and catering (Table 5.). Moreover, it should be noted that if in social infrastructure and public administration there are no special requirements for physical health and employment depends mainly on experience, professional skills and knowledge, then in construction, industry, transport and trade activities are risky and the health factor should have higher requirements. Nevertheless, taking into account the level of education, qualification training and experience of a worker, the inflow of labour force (45-54 age category and elder age categories) is an increasing, including pension age and those who are entitled to early retirement but continue working. This is a tendency of growth and it is a source of reproduction of labour force to cover its deficit in the conditions of decline in the number of working-age population and the ageing process.

Table 5 Characteristics of employment of working-age population in pre- and retirement ages

Type of economic activity, age groups	Quantity, thousand persons				Share of age group in total number of employed in the sector, %			
	2019	2020	2021	2022	2019	2020	2021	2022
Economy as a whole	872.4	834.2	843.4	862.3	100.0	100.0	100.0	100.0
45-54 years	199.0	191.6	195.7	206.8	22.8	23.0	23.2	24.0
55-64 years	158.6	156.2	160.4	164.5	18.2	18.7	19.0	19.1
65 years and over	27.9	24.9	20.6	22.6	3.3	3.0	2.4	2.6
Agriculture, forestry and fisheries	182.8	175.9	181.2	179.3	100.0	100.0	100.0	100.0
45-54 years	49.3	45.9	51.1	51.7	27.0	26.1	28.2	28.8
55-64 years	44.7	44.1	42.4	43.7	24.5	25.1	23.4	24.4
65 years and over	10.8	7.3	6.4	7.7	5.9	4.1	3.5	4.3
Industry	128.0	121.4	121.6	127.6	100.0	100.0	100.0	100.0
45-54 years	30.0	27.1	27.9	28.2	23.4	22.3	22.9	22.1
55-64 years	21.1	18.8	20.5	21.6	16.5	15.5	16.9	16.9
65 years and over	2.7	2.5	1.4	1.7	2.1	2.1	1.1	1.3
Construction	61.4	60.4	65.1	66.5	100.0	100.0	100.0	100.0

45-54 years	12.0	11.1	13.3	18.0	19.5	18.4	20.4	27.1
55-64 years	6.7	7.9	8.8	8.8	10.9	13.1	13.5	13.5
65 years and over	0.8	0.5	0.4	0.7	1.3	0.8	0.6	1.1
Wholesale and retail, hotels and catering	163.8	148.4	147.5	152.7	100.0	100.0	100.0	100.0
45-54 years	28.8	29.2	31.5	35.2	17.6	19.7	21.3	23.1
55-64 years	20.3	17.8	19.6	19.9	12.4	12.0	13.3	13.0
65 years and over	2.7	2.5	2.1	2.6	1.6	1.7	1.4	1.7
Transport and storage, Information and communication	59.9	61.5	60.2	63.8	100.0	100.0	100.0	100.0
45-54 years	12.0	11.4	10.9	13.6	20.0	18.5	18.1	21.3
55-64 years	9.0	11.1	10.9	9.5	15.0	18.0	18.1	14.9
65 years and over	1.3	1.7	1.2	1.0	2.2	2.8	2.0	1.6
Public administration, Education, Health and social assistance	197.5	193.1	193.5	197.4	100.0	100.0	100.0	100.0
45-54 years	50.9	52.7	46.2	47.4	25.8	27.3	23.9	24.0
55-64 years	43.4	45.8	49.0	50.2	22.0	23.7	25.3	25.4
65 years and over	6.9	8.1	6.8	6.1	3.5	4.2	3.5	3.1
Other activities	78.9	73.5	74.3	75.1	100.0	100.0	100.0	100.0
45-54 years	15.9	14.2	14.9	12.7	20.2	19.3	20.1	16.9
55-64 years	13.3	10.8	9.2	10.8	16.9	14.7	12.4	14.4
65 years and over	2.6	2.4	2.3	2.8	3.3	3.3	3.1	3.7

Source: NBS data and authors' calculations, www.statistica.md

The consequences of demographic ageing should be considered as an inevitable cause of economic costs, including in labour market as a result of changes in the age structure, stopping of labour activity and exit from labour market to pension. This leads to a deficit of labour force and contributes to a slowdown in economic growth, as well as an increase in public expenditures on social security and protection, health, and changes in the structure of consumption. At the same time, increasing the employment rate of working-age elderly population is not only a quantitative reserve for increasing the labour force, but also creates a real opportunity to mitigate the consequences of ageing process by reducing the demographic burden on working-age population. As a consequence, it will improve the financial sustainability of the pension system, as well as tax revenues, which will help improve financing for social protection of socially vulnerable segments of population, including pensioners. *Consequently, the participation of elderly population in economic activity is an important factor in both economic and demographic terms.*

However, upon reaching the established by legislation pension age, the population faces a discrimination on the base of age, i.e. they are at risk. The principal reasons for which

an elder worker may be refused to continue working and its forced stopping are prejudices related to the fact that elder workers take the working places of youth, they are inefficient for modern production based on IT technologies and innovations, pensioners should make do with minimum needs and material costs, and so on. In the Republic of Moldova, labour relations are regulated according to the norms established in the Labour Code of the Republic of Moldova, Law nr. 154 as of 28.03.2003 (Official Monitor of the Republic of Moldova, nr. 159-162, 29.07.2003, Art. 648). Article 8 of this legislative act clearly states that discrimination based on the principle of worker's age prohibited in the country. However, there are further contradictions with the above-mentioned principle (Article 55). *Fixed-term labour contract*, item f) states that workers who have retired due to age or length of service (or who have acquired the right to such a pension) the contract may be concluded for the indefinite, but for period of up to two years. Moreover, Article 86 *Dismissal*, in item y¹) states that at the employer's initiative, termination of an individual labour contract may take place if the worker has the status of an age pensioner (*Art. 86 part (1), item y¹) introduced by Law nr. 188 of 21.09.17, OM364-370/20.10.17 Art. 622*). Given the above-mentioned, in modern society, the population that has reached the pension age limit, which is at the stage of transition from labour to pension, has unstable employment, social insecurity and risks of being excluded from the labour market. In given context, this category can be referred to such a social phenomenon as precariat, precarious or unsustainable employment, the characteristic of which is the loss of standard established by law labour relations, that are based on the labour contract and the transition to unprotected employment, as a rule, in the informal sector, informal employment. Precarious employment is one of the most complex social phenomena and an important problem for the socio-economic development of the country, which has consequences for the development of the economy, the financial stability of the state and Social and Health Insurance Budgets, and the competitiveness of labour market. The economic consequence of precarious employment is the deepening of the imbalance between supply and demand in labour market, which is based on social and labour relations “employer and employee”.

Table 6 Characteristics of employment of workers, elder age groups, informal employment

Type of economic activity, age group	Quantity, thousand persons				Share of age group in total number of employed in the sector, %			
	2019	2020	2021	2022	2019	2020	2021	2022
Economy as a whole	872.4	834.2	843.4	862.3	100.0	100.0	100.0	100.0
Formal sector enterprises	722.8	693.3	698.9	718.4	82.9	83.1	82.9	83.3
Informal sector enterprises	146.8	139.5	142.9	141.3	16.8	16.7	16.9	16.4
Households engaging workers	2.8	1.4	1.7	2.7	0.3	0.2	0.2	0.3
Formal workplace	670.6	647.5	651.2	672.9	76.9	77.6	77.2	78.0
Informal workplace	201.8	186.7	192.2	189.5	23.1	22.4	22.8	22.0

45-54 years	199.0	191.6	195.7	206.8	100.0	100.0	100.0	100.0
Formal workplace	152.3	148.4	148.2	156.5	76.6	77.5	75.7	75.7
Informal workplace	46.7	43.2	47.5	50.3	23.4	22.5	24.3	24.3
-including informal sector enterprises	33.5	31.4	34.8	37.5	71.7	72.7	73.3	74.6
55-64 years	158.6	156.2	160.4	164.5	100.0	100.0	100.0	100.0
Formal workplace	123.1	120.8	128.4	131.9	77.6	77.3	80.0	80.2
Males	65.3	65.3	68.1	68.4	53.0	54.1	53.0	51.9
Females	57.9	55.5	60.3	63.5	47.0	45.9	47.0	48.1
Informal workplace	35.4	35.4	32.1	32.5	22.4	22.7	20.0	20.0
Males	20.1	22.3	20.3	19.6	56.8	63.0	63.2	60.3
Females	15.4	13.1	11.7	12.9	43.2	37.0	36.8	39.7
-including informal sector enterprises	26.2	27.5	25.2	25.0	74.0	77.7	78.5	76.9
Males	15.5	17.7	16.5	15.8	59.2	64.4	65.5	63.2
Females	10.7	9.8	8.6	9.3	40.8	35.6	34.5	36.8
65 years and over	27.9	24.9	20.6	22.6	100.0	100.0	100.0	100.0
Formal workplace	17.7	18.4	15.2	16.0	63.4	73.9	73.8	70.8
Males	10.1	9.4	7.1	8.0	57.1	51.1	46.7	50.0
Females	7.6	9.0	8.0	8.0	42.9	48.9	51.1	50.0
Informal workplace	10.2	6.5	5.4	6.6	36.6	26.1	26.2	29.2
Males	4.3	3.0	3.1	4.1	42.2	44.6	57.4	62.1
Females	5.9	3.6	2.3	2.5	57.8	55.4	42.6	37.9
-including informal sector enterprises	9.0	6.1	5.2	6.3	88.2	93.8	96.3	95.5
Males	4.0	2.8	3.0	4.0	43.3	45.9	57.7	63.5
Females	5.1	3.3	2.2	2.4	56.7	54.1	42.3	36.5

Source: NBS data and authors' calculations, www.statistica.md

The share of employed population in informal sector is up to 17%, on informal work places - 22%. In principle, working-age population, including those of pre-pension age, taking into account the requirements of the legislation on the pension system, the necessities to confirm the labour insurance period and data on received income, prefers employment on formal work places. However, the share of employed population (age group 45-54) on informal work places is 24.3 %, i.e. higher than in the pension group 55-64 (20.0%). The elder age group 65 years and over has the highest employment rate on informal jobs (29.2%), including in informal sector enterprises (95.5%). Economic activity in informal sector of economy, which, as a rule, is based on the absence of a labour contract/agreement with hiring worker and all rights and labour relations are negotiated verbally, social and medical insurance contributions are not transferred, i.e. there is an absence of guarantee of economic and social security of workers. Moreover, taking into account the perfection of pension legislation, including the possibility of pension recalculation and early retirement, as well as the expansion of types and kind of medical services on the basis of a medical insurance policy, both the age group 45-54, which is at the stage of transition from labour activity to pension, and pensioners of elder groups are

in a situation of social risks and are deprived of the opportunity to improve their standard of living.

One of the most important economic factors influencing the decision to continue labour activity or to retire and its interruption is the material component, income and the possibility of providing for one's living needs. During the economic labour activity, a worker receives a wage for his hired labour (in 2022 the share of hired workers is 79.4% of total employed population, compared to 77.8% in 2018, i.e. it increased by 1.6 p.p., authors' calculation based on NBS data [www/statistica.md](http://www.statistica.md)). The amount of wages is differentiated by types of economic activity, by sectors, by gender and its amount affects the value of pension.

Table 7 Wage dynamics, 2019-2022

	2019	2020	2021	2022	2022/ 2019, %
Average monthly wage per worker, PM, MDL	7 356.1	8 107.5	9 115.9	10 529.1	143.1
% to the previous year	114.1	110.2	112.4	115.5	-
Average monthly wage per worker, budget sector, lei	6 636.2	7 313.8	7 786.6	8 844.6	133.3
% to the previous	116.9	110.2	106.5	113.6	-
Average monthly wage per worker, real sector, lei	7 627.1	8 402.7	9 595.0	11 126.6	145.9
% to the previous year	113.0	110.2	114.2	116.0	-
Budgetary sector wage/Real sector wage, %	87.0	87.0	81.2	79.5	-7.5n.n.
Gender Pay Gap, %*	14.1	13.7	13.6	...	
Wages by sectors of economy, MDL					
Agriculture, forestry and fisheries	4 834.4	5 167.3	5 790.9	7 000.7	144.8
Industry	7 184.3	7 673.6	8 333.6	9 647.4	134.3
Construction	7 301.5	7 728.1	8 106.2	9 316.3	127.6
Wholesale and retail trade, servicing and repair of motor vehicles and motorbikes	6 729.4	7 346.4	8 163.5	9 443.2	140.3
Transport and storage	6 979.3	6 647.3	7 376.8	8 936.8	128.0
Public administration and defense, obligatory compulsory social insurance	8 916.9	9 769.4	10 395.7	11 901.7	133.5
Education	6 338.7	7 023.3	7 440.5	8 417.1	132.8
Health and social assistance	7 160.1	8 718.9	11 299.5	11 651.1	162.7

Note:

* Gender Pay Gap (gender pay inequality in remuneration in unadjusted form) - the share of the difference between the average monthly gross wages of males and females in the average monthly gross wages of males as a percentage.

Source: NBS data and authors' calculations, www.statistica.md

It follows from the analysis of wage data that during 4 years (2019-2022) its amount increased from 30 to 40% and more, and in health and social protection by 1.6 times. The gap in the amount of wages in budget and real sectors reduced by 7.5 p.p. At the same time, the annual analysis of the distribution of wages' amount by type of economic activity showed that in 2022 the highest level of wages is in information technology and communications (from 10.0 to 20.0 thousand MDL for 36.2% of employees and 43.4% of employees over 20.0 thousand MDL), financial activities and insurance (from 10.0 to 20.0 thousand MDL for 47.8% of employees and 25.9% of employees over 20.0 thousand MDL), public administration, defense, obligatory social insurance (from 10.0 to 20.0 thousand MDL for 36.0% of employees and 7.3% of employees over 20.0 thousand MDL), production and supply of electricity, heat, gas, hot water and air conditioning (from 10.0 to 20.0 thousand MDL for 55.3% of employees and 13.8% of employees over 20.0 thousand MDL), scientific, technical and professional activities (from 10.0 to 20.0 thousand MDL for 27.1% of employees and 12.8% of employees over 20.0 thousand MDL). The lowest wages are registered in agriculture, forestry and fisheries (including 0.5% of workers receiving wages up to 3500.0 MDL, 51.4% of workers have wages between 3500.01 and 6000.0 MDL, 20.4% of workers have wages between 6000.01 and 8000.0 MDL, 20.5% of workers have wages between 8000.01 and 15000.0 MDL, and 7.2% of workers have wages of 15000.01 MDL or more)³. Based on the amount of wages, insurance contributions were determined and transferred, which is included in the calculation of amount of future pension.

The low amounts of income received are cause of the low amount of accrued pensions.

Table 8 Dynamics of disposable income per household member

	2019	2020	2021	2022	2022/2019, %
Average monthly disposable income, total, MDA	2880.6	3096.6	3510.1	4252.6	147.6
Urban	3521.9	3695.2	4309.0	5355.3	152.1
Rural	2457.2	2702.3	2985.0	3528.4	143.6
Male head of household	2900.8	3157.3	3566.2	4361.7	150.4
Female head of household	2837.7	2973.8	3394.5	4039.0	142.3
Female/male income, %	97.8	94.2	95.3	92.6	-5.2 p.p.
Average monthly income depending on economic status of household head, MDL					
Hired workers	3478.1	3712.4	4188.7	4950.9	142.3
Self-employed workers in agriculture (farmers)	1828.2	2276.3	2408.0	2866.2	156.8
Self-employed workers in non-agricultural activities	2837,4	2824.1	3379.6	4283.9	151.0
Pensioners	2443.6	2640.3	2943.9	3688.0	150.9
- including pension, MDL	1278.1	1408.8	1608.0	2240.0	175.3
- % of total income	52.3	53.4	54.6	60.7	+8.4 p.p.
Other activities	2399.3	2386.4	2810.6	3384.0	141.0

³ Calculated by the authors on the basis of NBS data (NBS, 2022 b)).

Average monthly disposable income of one household member by main age groups, MDL					
Under 30 years	3511.8	4129.2	4108.3	5153.1	146.7
30-39 years	2816.4	2971.5	3318.3	4390.6	155.9
40-49 year	2739.5	2839.4	3472.1	3956.9	144.4
50-59 years	3098.0	3409.5	3839.5	4440.9	143.3
60-64 years	2864.7	3132.7	3827.9	4417.5	154.2
65 years and over	2602.6	2394.8	3047.8	3891.3	149.5
Subsistence level of pensioner by age, MDL	1707.4	1759.8	1811.7	2193.3	128.5

Source: NBS data and authors' calculations, www.statistica.md

Comparative analysis of the average monthly income of one household member in dynamics gives a possibility of evaluation the standard of living and material condition of the future life at the end of labour activity and retirement. As follows from the data presented in Table 8., the share of pension in total disposable income of a pensioner increased and is 60.7%, the rest of the income is formed at the expense of provision a social assistance, savings, remittances from household members working outside the country, from private property and so on, which are not permanent sources of income and depend on external factors. The income of one household member (age group of 65 years and over) increased by 1.5 times during the analysed period, but it is the lowest compared to other age groups, and pension is not the main source of their formation and given households are most at the risk of poverty.

Moreover, it can be noted that the disposable income of one household member tends to decrease as the age limit increases from young ages 30 years to 49 years (from 5153.1 MDL to 3956.9 MDL or by 23.2%). The gender gap in income decreased by -5.2 p.p.

Differentiation in incomes according to the principle of age is the principal factor in making a decision on retirement and interruption of labour economic activity, including taking into account the factor of dependence of the pension amount from the amount of insurance incomes.

Table 9 Structure of main components of disposable income of household members in elder age groups and their poverty level

	2019	2020	2021	2022	Difference between 2022 and 2019, p.p.
Wage, % of total disposable income					
50-59 years	59.2	56.8	59.2	60.8	+1.6
60-64 years	36.4	39.7	44.0	38.9	+2.5
65 years and over	16.4	14.0	13.7	14.3	-2.1
Social benefits, % of total disposable income					
50-59 years	11.0	11.6	10.1	9.2	-1.8
60-64 years	35.6	34.7	32.7	36.2	+0.6
65 years and over	61.8	65.0	66.3	70.6	+8.8
- including pensions, % of social benefits					

50-59 years	7.9	8.7	6.5	6.5	-1.4
60-64 years	30.7	28.5	28.3	30.7	-
65 years and over	55.4	56.8	59.0	63.3	+7.9
- including social assistance, % of social benefits					
50-59 years	0.5	0.5	0.7	0.3	-0.2
60-64 years	0.5	0.6	0.5	0.2	-0.3
65 years and over	0.3	0.2	0.2	0.1	-0.2
Remittances from labour migrants, % of total disposable income					
50-59 years	11.9	14.9	11.8	10.0	-1.9
60-64 years	9.6	8.6	8.3	7.5	-2.1
65 years and over	6.7	7.2	7.6	4.2	-2.5
Absolute poverty rate of a household whose head has an age, %					
40-49 years	23.8	23.1	21.3	29.3	+5.5
50-59 years	20.7	24.8	19.3	28.5	+7.8
65 years and over	36.8	37.2	35.9	43.9	+7.1
- including those whose main source of income is pension	38.3	39.5	38.2	45.8	+9.1
Poverty assessment if in the structure of income the social benefits (including pension) exceeds labour income*, %					
-poor	26.8	26.0	27.5	28.0	+1.2
non-poor	12.1	12.2	11.7	12.7	+0.6

Note:

* Poor - people whose average monthly expenditures per adult equivalent are below the absolute poverty line.

Non-poor people are those whose average monthly expenditures per adult equivalent is more or equal to the absolute poverty threshold.

Source: NBS data and authors' calculations, www.statistica.md

The analysis of the structure of household incomes at elder ages shows that the largest share of pension as a source of income is in the age group 65 years and over (63.3%), and in the age group 60-64 years in the structure of income 39% constitute the wages. The role of social assistance as a tool to support the population of pension age, is insignificant and tends to decrease. It can also be noted that the share of remittances from labour migrants in the financial support of households decreased. The results of comparative analysis of disposable income data and their structure (Table 8. and Table 9.) lead to the deterioration of material well-being of households in elder age groups. It is confirmed by the data about the increase in absolute poverty rate in 2022, including for households in the 50-59 age group by 7.8 p.p. and in the 65 and over age group by 7.1 p.p., and for households whose main source is pension - by 9.1 p.p. compared to 2019.

Consequently, based on the above, *the material component is one of the principal economic factors* influencing the decision to continue economic activity or its stoppage and retirement. However, the presence of age discrimination in labour legislation does not always correspond to the desire of working age population to continue labour activity. The termination of labour activity when the age limit established by the country's

legislation is reached, and retirement become an inevitable fact (in 2022, the share of pensioners in labour market was only 24% of the total number of pensioners by age, Table 4.).

Table 10 Structure of pensioners by some categories of pensions, as of 01 January

	2019	2020	2021	2022	2023
Pensioners, total, persons	703899	696011	686251	674948	675674
Pensioners by age, persons	526651	524451	522821	520927	526017
- including % of total	74.8	75.4	76.2	77.2	77.8
Pensioners by length of service(by seniority), persons	59	56	50	32	25
Pensioners by age in case of early age pensions, persons.	7565	5364	2105	1343	1194
Long career pensioners in case of early retirement, persons	-	-	-	-	4862
Structure of pensioners by age by main age groups, thousand persons					
Total	526.7	524.5	522.8	520.9	-
under 50 years	0.01	0.01	0.01	0.01	-
50-54 years	0.05	0,05	0,04	0,03	-
55-59 years	47.4	34.7	21.2	10.8	-
- including % of total	9.0	6.6	4.1	2.1	-
60-64 years	133.6	132.0	133.9	135.6	-
- including % of total	25.4	25.2	25.6	26.0	-
65 years and over	345.6	357.7	367.7	374.5	-
- including % of total	65.6	68.2	70.3	71.9	-
Characteristics of pensions, MDL					
Average monthly amount of the established pension in the Republic of Moldova	1709.2	1901.1	2104.5	2578.5	3156.4
Average monthly amount of pensions by age	1643.7	1843.0	2067.5	2595.3	3164.9
- females	1 520.21	1 711.56	1 919.94	2432.16	-
- males	1 940.06	2157.76	2 409.25	2 960.65	-
Gender Gap in pensions, %	78.4	79.3	79.7	82.1	-
- agricultural sector	1 289.06	1 447.39	1 522.18	1 984.84	-
- non-agricultural sector	1 832.36	2 042.73	2 330.39	2 875.79	-
Agricultural sector pension/Non-agricultural sector pension, %	70.3	70.9	65.3	69.0	-
Average monthly amount of pensions by length of service (by seniority)	839.4	967.1	1006.5	1118.4	1438.8
Average monthly amount of pensions by age in case early age pension	2972.4	3076.9	2855.1	2959.6	3344.4

Average monthly amount for long-term work pensions in case early retirement	-	-	-	-	5891.3
Replacement rate (pension/wage), %	25.1	25.5	28.3	30.1	-

Note:

*Since 01.01.2019, the pension' age has increased for males - 63 years, females - 58 years.

*Since 01.01.2021, the pension' age for females has increased - 59 years.

*Since 01.01.2023, the pension' age for females has increased - 60 years.

* Since 01.01.2018 an early age pension is assigned.

* Since 01.01.2022, an early pension for long-term work is assigned.

Source: NBS data and authors' calculations, www.statistica.md

The total number of pensioners in the country as of 01.01.2023 compared to 01.01.2019 decreased by 4%, including age pensioners by 0.1% or practically did not, the number of pensioners by length of service decreased by 57.6%, and the number of pensioners by age in case of early age pension decreased significantly or 6.3 times. The main share in total number of pensioners consists from pensioners by age (77.8%), increasing by 3.0 p.p. compared to 01.01.2019. The main tendency characterizing the structure of pensioners by age is the increase in the share of pensioners in elder age group 65 years and over (by 6.3 p.p.). The pensioners' households in the given group have the highest risk of poverty (43.9%, Table 9.), the share of pensioners in the age group 55-59 years decreased significantly (from 9.0% as of 01.01.2019 to 2.1% as of 01.01.2023, or by 6.9 p.p.). This situation is explained by the reform of the pension system and the increase of the retirement age to 63 years for males and the gradual increase of the retirement age for females, which from 01.01.2023 was 60 years, and the age of 63 years for females will be established from 01.07.2028 (Art. 41 of the Law on the State Pension System, nr. 156 of 14.10.1998. Published on 17.12.1998 in Official Monitor of the Republic of Moldova, nr. 111-113, article nr. 683, with subsequent amendments and additions). As a result of the ongoing social policies to increase the amount of pensions and its indexation in the conditions of growth of prices and tariffs for foodstuff and communal services, as of 01.01.2023, the average monthly amount of the established pension increased by 1.85 times, and the average monthly amount of pension by age increased almost two times (1.93 times). However, with this positive tendency gender differences remain (the difference between pensions of females and males in 2022 was 17.9%, Gender Gap in pensions), as well as differences in the amount of pensions of employed in the agricultural and non-agricultural sectors (the difference in 2022 was 31.0%). Despite the positive tendency in the growth of the replacement rate (pension/wage), its value remains small (30.1%), while earlier in the Strategy for Reforming the Pension Insurance System in the Republic of Moldova (Official Monitor of the Republic of Moldova, 1998, nr. 108, art. 502) it was planned to increase its value to the level of 42%. In this context, it should be noted that in ILO Recommendation 167 (ILO, nr. 167. The Maintenance of Social Security Rights Recommendation, 1983) for developed countries the replacement rate is set at 45%, but currently it achieves 50% and more. In the Republic of Moldova, with the majority of low wages, the gap between the labour income received and the amount of pension is quite

significant, which is a motive for the population of pension age to continue economic activity, even independently from the physiological features and capabilities of the organism and the state of health.

Taking into account the above mentioned, the psycho-emotional state of an economically active employed worker (in working-age) when approaching the established pension age limit or the period of transition from labour market and his decision to retire will largely depend on the income received, availability of savings, family status and health of family members, as well as on the socio-economic situation and legislation (in the field of pension provision, labour relations, social protection, medical service). Moreover, the decision taken will be based on economic factors - income after termination of labour activity, which will allow the possibility of providing material goods and necessary nutrition, the quality of social and medical services received, the guarantee of social protection and a number of other vital areas to ensure a decent standard of living and exception the risk of poverty. In this context, another external factor of economic nature should be noted, which is related to the implementation of structural reforms in the economy and the social sector, the consequence of which is the optimisation of financial resources of economic agents and institutional structures in the conditions the development of private property, the increase in prices and tariffs for material and energy resources, the expansion of practices for the implementation of modern IT-technologies and digitalization. As a rule, the implementation of the above-mentioned actions is carried out by reducing the number of workers, mainly of elder age groups, which is not contradictory and, moreover, is provided for in the labour legislation of the country, in the Labour Code of the Republic of Moldova, Law nr. 154 of 28.03.2003 (Official Monitor of the Republic of Moldova, No. 159-162, 29.07.2003, art. 648).

In addition to the above, it can be noted another economic factor related to the termination of economic activity and the transition from labour market to pension, namely the formation and stability of the Social Insurance Budget, which impacts the timely payment of pensions and the provision of social assistance. According to the Law on the State Social Insurance System nr. 489 of 08.07.199, Chapter II of the State Social Insurance Budget, Article 11 (published on 06.01.2000, in Official Monitor nr. 1-4, Article nr. 2, with subsequent amendments and additions), budget revenues are formed from social insurance contributions, transfers from the state budget and other sources of revenues provided for by legislation. Taxpayers' contributions to the social insurance system constitute the main share of revenues (60-70%), but if there are no enough funds to cover social insurance (pensions) and social protection needs, the budget deficit is covered by transfers from the State Budget.

Table 11 Structure revenues of State Social Insurance Budget

	2019	2020	2021	2022
Revenues, million MDL	21 748.3	24 285.6	27 246.8	31 224.2
Contributions for obligatory social insurance, million MDA	13 635.7	14 295.4	16 223.9	18 367.7
Other revenues, million MDL	155.6	220.8	298.3	306.5

Transfers from the budget, million MDL	7 957.0	9 769.4	10 724.7	12 550.0
Structure of revenues, %	100.0	100.0	100.0	100.0
Contributions for obligatory social insurance, million MDL	62.7	58.9	59.5	58.8
Transfers from the budget, %	36.6	40.2	39.4	40.2
Other revenues, %	0.7	0.9	1.1	1.0
Expenditures, million MDL	21 602.3	24 244.4	27 186.8	31 224.2
Pensions, million MDL	13 342.9	14 125.9	15 731.2	19 876.6
% in total expenditures	61.8	58.3	57.9	63.7

Source: NSIF data and authors' calculations, www.cnas.md

The share of revenues from obligatory social insurance contributions is less than 60% and decreased by 0.7 p.p. in 2022 compared to 2021. The given source of revenues depends on the number of workers employed in labour market independently of the form of employment. The decline in the number of workers as a consequence of demographic processes, including labour migration, population ageing and the transition of working-age worker from labour market to pension and thus increasing the demographic burden on employed population, as well as employment of the population in elder age groups in the informal sector, which is followed by non-payment of social contributions and wages “in envelopes”, all of the above is a challenge for socio-economic policies, as it leads to financial instability of the Social Insurance Budget. Moreover, in the given conditions, taking into account the growth of elderly population, a moment may actually come when the future pensioner will not receive a pension due to the lack of financial coverage of funds necessary for its payment. Consequently, the factor of age pension limit and the problem of transition from economic activity to its termination and retirement is of great economic and social importance, and should also be in the focus of attention and taken into account in the elaboration of programmes and strategies of medium- and long-term development of the country.

5. Results

Achievement the established pension limit and, as a consequence, making a decision to stop a labour activity and retirement or, on the contrary, if possible, to continue active economic activity is an important factor for both person himself and society. As a rule, economic factors are the basis for making a decision on this problem. **In a more wide sense**, from the economic point of view, it follows from the performed analysis that the pension period can be divided into 2 stages. Thus, the age of 65-75 years is characterized as a period of retirement, maintenance of professional experience and the presence of economic activity, employment in labour market is possible, an increase in the level of well-being due to labour income and pension. The life stage of 75-85 years is characterized by the stop of labour activity, the appearance of age-related diseases, a decrease in the level of expenses, the necessity of care, and so on. Then follows the life stage of 75-85 years, which is characterized by the cessation of labour activity, the emergence of age-related diseases, a decrease in the level of expenditure, the need for care and so on. At this stage, the role of social assistance and medical services from the state increases,

which requires an increase in social financing due to the growing demographic burden (the coefficient of demographic dependence on ageing in the Republic of Moldova was 24.4% in 2022 and increased by 4.0 p.p. compared to 2019). At the same time, the share of pensioners employed in labour market in 2022 constituted to 24.0% and its growth constituted to 1.0 p.p. compared to 2019. Moreover, the working-age population of pension age, firstly, faces discrimination and restrictions in continuing or hiring on the basis of age according to the labour legislation, and secondly, given category of workers is employed in low-paid fields, including the agricultural sector, social infrastructure and management institutions, which do not provide a large inflow of financial income from social contributions, thirdly, the employment of elderly in informal sector and informal work places that do not deduct and do not pay contributions to the Social Insurance Budget. Due to the fact that the pension system in the Republic of Moldova is based on the principle of solidarity between generations, the declining and ageing population led to its financial instability and is a challenge for its reformation and perfection. Moreover, population ageing also contributes to the slowdown of economic growth, which is a potential challenge to the Country's Economic Security. **In a more restricted notion**, population ageing and transition from labour activity to pension, adaptation to new conditions of existence represents an important life stage for a person, including from the economic point of view. The transition from labour activity to pension supposes a redistribution of activities from active economic activity directed at ensuring well-being and a decent standard of living to passive, which to a great extent depends on the amount of pension and one's own savings, as well as on the possibility of receiving state-guaranteed medical and social services, participation in socio-public and cultural life. The low amount of pension, which on average in the country is 30% of the average monthly wage, is not a guarantee for satisfaction with life in pension, on the contrary, it promotes the search for new sources of income to ensure their vital and necessary requirements. In given context, the amount of a worker's potential wage is the primary economic factor in the process of transition from labour market to pension. Researches show that during the first year after receiving of pension, more than 60% of pensioners remain employed in labour market, but further the number of pensioners employed in the economy decreases, the principal factor of pensioner's employment is the state of health. In relation to the latter, the employment of pensioners is shifting to more intellectual spheres of activity - education, science, health, social services, activities in which do not require high physical costs and are not risky for health, but also have higher requirements for professional level, experience and knowledge, the use of which is a resource potential for the stability of labour market.

In the Republic of Moldova, the threshold of old age is the legislated pension age of 63 years (for men 63 years is established as of 01.01.2019, and women will reach given age limit in 2028, based on an annual gradual increase of 0.5 years). As a consequence of increasing life expectancy, elder people are hostages to stereotypes of their perception as a "burden" on employed population, inefficient workers and so on, the reason of which are existing legislation (Labour Code), facts of age discrimination, restrictive barriers that prevent elder people from participating in economic activities and social life.

In order to reduce the negative consequences of achievement the established by legislation the age pension limit and harmonise the transition period from labour market to pension, as well as to maintain the stability of labour market, it is advisable to carry out the following:

- **Ensure the social integration of elder people**, including to help them to be active after the age of 60, which will activate the inactive resource hidden under the status of "age", as well as will give an opportunity to ensure the transition of the status and role of a pensioner able to work from the period of professional economic activity to the period of retirement. However, the realisation of given transition will depend on the understanding of the social utility of elder people;
- **Promote active ageing**, including through the implementation of socio-economic reforms that will ensure employment, including through the reconversion of the elder labour force and economic growth rates, **reduce the impact of population ageing** on economic growth, and support the achieved level of social assistance (benefits);
- **Review working conditions and employment schedules** for all age groups of population within the framework of the global policy on labour activity, family, existing social protection in the country and retirement upon achievement at pension age limit;
- **Review the existing pension system in the country**, including raising the pension age, the relationship with public expenditures and ensuring stable development of labour market (covering of labour force deficit), as well as ending the practice of early retirement for a number of circumstances through the use of flexible measures to stimulate employers;
- **Elaborate measures** to postpone retirement by amending the current legislation;
- **Amend the labour legislation** to eliminate provisions containing age discrimination, so working-age population of pension age can continue to work in accordance with their professional experience and skills;
- **Provide training and support for elder people** of public interest, including the job placement of elder people without health problems in home care, as companions for disabled people or as educators of children for working young women, as well as promoting the idea of volunteering among the age elder population to expand the types of activities mentioned above;
- **Involvement by the National Employment Agency** the population of pension age in vocational training/retraining/re-qualification courses for certain categories of unemployed;
- **Providing of benefits for pensioners** to care for grandchildren in situations where parents return to work and are unable to place their children in a pre-school institutions;

- **Providing of benefits for pensioners** to care for grandchildren in situations where parents return to work and are unable to place their children in a pre-school institutions;
- **Expansion of the practice** of providing various stimulus and preferences to employers who hire/continue labour contracts to work with people who have reached or already have pension age.

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